

MILLER, M.Ye
MILLER, M.Ye

Summer marches in Crimean schools. Geog. v shkole 21 no.2:53-54
Mr-Ap '58. (MIRA 11:2)

1. Shkola No.1, Simferopol'.
(Crimea--School excursions)

MILLER, M. Ye.

Cand Geog Sci - (diss) "Physico-geographic characteristics of the basin of the Salgir River." Kiev, 1961. 20 pp; (Ministry of Higher and Secondary Specialist Education Ukrainian SSR, Kiev Order of Lenin State Univ imeni T. G. Shevchenko); 150 copies; price not given; (KL, 6-61 sup, 201)

MILLER, N. B.

USSR/Chemistry - Hydrogen Peroxide
Chemistry - Oxidation

Jan 49

"Study of the State of Oxygen Adsorbed in Carbon According to Its Ability to Form Hydrogen Peroxide and Water," R. Kh. Burshteyn, N. B. Miller, Inst of Physicochem, Acad Sci USSR, 7 pp

"Zhur Fiz Khim" Vol XXIII, No 1

Discusses Experiments by Kuchinsky, Burshteyn and Frankin on adsorption of electrolytes at various potentials of carbon electrode, and mentions recent published work by Winslow on investigation of the process of FeSO_4 oxidation in presence of acid. Describes own studies on adsorption of sulfuric acid in relation to quantity of adsorbed oxygen, which showed that an equivalent correlation is observed between adsorbed oxygen and the acid even in presence of small quantities of oxygen. This conforms with data obtained by Frankin and Lavrovsky. Gives tables on adsorption of sulfuric acid. Submitted 27 Apr 48.

PA 48/49T20

1ST AND 2ND COVER		PROCESS AND PROPERTIES INDEX		100 AND 2TH COVER	
SA				A 54 B	
<p>541.135.5</p> <p>3141. Measuring exchange currents on amalgam electrodes by means of radioactive indicators. N. B. MILAR AND V. A. PLESKIN. Dokl. Akad. Nauk, SSSR, 74 (No. 2) 323-5 (1950) in Russian.</p> <p>Results are given for the exchange currents measured on electrodes consisting of liquid amalgams of Bi, Pb and Zn, in contact with solutions of their respective salts. The radioactive isotopes used were: Bi^{214} (RaD, $T_{1/2} \approx 5$ d), Pb^{214} (RaD, $T_{1/2} \approx 22$ yr), and Zn^{65} ($T_{1/2} \approx 250$ d). The exchange currents in strong solutions have for all three amalgams values lying between $0.1-0.04$ amp/cm². For smaller concentrations the currents are weaker, and for concentrations $< 0.2N$ there exists a proportionality between i and c in the case of Zn and Bi.</p> <p>D. LACHMAN</p>					
<p>ASB-11.6 METALLURGICAL LITERATURE CLASSIFICATION</p> <p>FROM SYNOPTIC</p> <p>FROM SYNOPTIC</p> <p>FROM SYNOPTIC</p>					

MILLER, N.B.

*Investigation of the Reaction of Exchange of Ions Between the Electrode and the Solution by a Method of Radioactive Indicators. V. A. Pleskany and N. B. Miller. (*Trudy Sovetskoye Khimii* 1950, 1953, 163-180).—[In Russian]. Radioactive indicators were used to measure the exchange current (i) between amalgams and soln. contg. ions of the amalgamated metal at various concentrations: Bi-Hg with BiCl_3 , HCl and ether soln. of BiCl_3 ; Zn-Hg with ZnSO_4 , ZnSO_4/KCN , $\text{ZnSO}_4/\text{NH}_4$, and ZnSO_4 Na citrate; Pb-Hg with $\text{Pb}(\text{NO}_3)_2$. For nearly saturated amalgams in pure conc. soln., $i \approx 0.1$ amp./cm². Complex formation greatly reduced i , the exchange being especially retarded if the metal entered a complex anion. The adsorption of surface-active substances on the electrode surface led to a sharp reduction in the exchange rate and in some cases to the complete cessation of exchange. The effect is particularly great with electrostatically adsorbed surface-active ions.—G. V. E. T.

①
PH

SMV
EMV

MILLER, N. B.

500-200

The mechanism and kinetics of oxidation-reduction reactions in aqueous solutions under the influence of radioactive radiation. V. I. Veselovskii, Ts. I. Zelikind, N. B. Miller and N. A. Aladshava. *Soviet Radiat. Environ.*

0.2

"APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R001134310

APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R001134310C

N. B. MILLER

6
9
1-PM

The mechanism of radiation-chemical homogeneous and heterogeneous formation of hydrogen peroxide. V. I. Veselovskii, N. B. Miller, and D. M. Shub, *Sbornik Rabot Radiatsionnoi Khim., Akad. Nauk S.S.S.R.* 1955, 49-60. — Peroxide formation under the influence of γ -radiation

Chem ~~Label Radiat. Chem. Kim., Acad. Nauk S.S.S.R., 1960~~
 49-60. Peroxide formation under the influence of ~~radiation~~
 from an 80-curie Co^{60} source was studied in NaOH solns.
 (up to 0.3N), in Ba(OH)₂ solns. of similar concn., and in
 ZnO suspensions in NaOH soln. In NaOH solns., steady-
 state concns. of H_2O_2 corresponded to $9 \times 10^{-4}N$. In the
 case of Ba(OH)₂ solns., the pptn. of $\text{BaO}_3 \cdot 2\text{H}_2\text{O}$ permitted
 the peroxide yield to vary linearly only with time in expts.
 lasting as long as 8 hrs. The rate was equal to 1.7 equiv./
 100 e.v. which was the same as the initial rate in NaOH
 solns. In expts. with 2 g. of ZnO suspended per 100 ml. of
 0.01N NaOH soln., H_2O_2 formation rates increase by 3-6
 times over those observed in the absence of ZnO. The ef-
 fect of ZnO is related to its absorption of radiation and its
 properties as a semiconductor. The reaction rates are
 followed by a novel anode-polarographic method.
 G. H. Fuchsman

RMF ~~RMF~~

BAKH, N.A., prof., otvetstvennyy red.; MEDVEDEV, S.S.; VESELOVSKIY, V.I.,
prof.; DOLIN, P.I., doktor khim. nauk; MILLER, N.B., kand. khim.
nauk; TSEPLIN, B.L., kand. khim. nauk; TRIFONOV, D.N. red. izd-va;
BUGAYEV, L.T., red. izd-va; MOSKVICHENKO, N.I. tekhn. red.

[Transactions of the First All-Union Conference on Radiation Chemistry].
Vsesoiuznoe soveshchanie po radiatsionnoi khimii. 1st, Moscow, 1957.
Trudy... Moskva, Izd-vo Akad. nauk SSSR, 1958. 330 p. (MIRA 11:7)

1. Chlen korrespondent Akademii nauk SSSR (for Medvedev).
(Radiochemistry--Congresses)

21.4300

38578
S/081/62/000/010/015/085
B138/B101

AUTHORS: Zalkind, Ts. I., Miller, N. B., Gochaliyev, G. Z.,
Veselovskiy, V. I.

TITLE: Radiation electrochemical processes in aqueous electrolyte
solutions

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1964, 62, abstract
10B416 (Tr. Tashkentsk. konferentsii po mirn. ispol'zovaniyu
atomn. energii, 1959, v. 1. Tashkent, AN UzSSR, 1961, 347-354)

TEXT: By means of electrochemical measurements on Pt-, Au- and Hg-electrodes, a study has been made of the radiation electrochemical processes that occur in solutions of H_2SO_4 and of H_2SO_4 with additions of $U(4+)$, $U(6+)$, $(COOH)_2$, during Co^{60} γ radiation. From the results it is concluded that both molecular hydrogen and H atoms are ionized. (Their stationary concentration at a dose rate of $6.1 \cdot 10^{16}$ ev/cm² sec was assessed as $2.3 \cdot 10^{-5}$ N; this diminished with pH). On the Hg-electrode in the presence of O_2 the HO_2 radical is reduced. It was found that if the solutions of
Card 1/2

Radiation electrochemical processes in ...

S/081/62/000/010/015/085
B138/B101

uranium salts were subjected to radiolysis, the rate of U(5+) accumulation in the mixture of U(4+) and U(6+) was twice as high as in the U(4+) solution. In the H_2SO_4 solution with $(\text{COOH})_2$ additions, the curve for the accumulation of H_2 in dependence on the $(\text{COOH})_2$ concentration shows a maximum at $\sim 1 \cdot 10^{-2}$ N. H_2O_2 formation begins in this same range.

[Abstracter's note: Complete translation.]

Card 2/2

S/844/62/000/000/032/129
D244/D307

AUTHORS: Miller, N. B., Veselovskiy, V. I. and Borotyntsev, V. A.

TITLE: Investigation of the mechanism of radiation-electrochemical processes in aqueous solutions of uranium salts

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by. L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 193-198

TEXT: Solutions of hexavalent U and mixtures of U^{VI} and U^{IV} were investigated to elucidate the mechanism of radiation-electrochemical conversions, using Pt, Au and Hg electrodes. The method used was that described previously (Collection: Deystviye ioniziruyushchikh izlucheniye na neorganicheskiye i organicheskiye sistemy, Izd-vo AN SSSR, 1958, p. 93 (The action of ionizing radiation on organic and inorganic systems.)). On irradiation the Pt electrode potential in a solution containing U^{IV} assumes a value about 20 mv lower than zero (w.r.t. the hydrogen electrode). The effect is accompanied by

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S/844/62/000/000/052/129
D244/D307

Investigation of the ...

vigorous evolution of H_2 resulting from the presence of U^{IV} , which acts as an OH acceptor and prevents the recombination of H and OH. In the presence of U^{VI} and U^{IV} there is some formation of U^V by the reduction of U^{VI} and oxidation of U^{IV} . The yield of U^V in solutions containing only U^{VI} was about 4 ions/100 ev, and in those containing both U^{VI} and U^{IV} it was 8 ions/100 ev. Stationary concentrations of U^V in the solutions were found to be in the ratio of $\frac{1}{\sqrt{2}}$. Study of depolarization currents at a Pt electrode potential of 0.4 v, the electrode being immersed in the uranyl solutions irradiated with 4×10^{16} ev/ml.sec, showed that for a given dosage the lower concentration limit, corresponding to approximately complete capture of H by the uranyl ions, is 5×10^{-2} M. Study of the formation of U^{VI} and U^V on the oxidation of U^{IV} solutions showed that for increasing

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Investigation of the ...

S/844/62/000/000/032/129
D244/D307

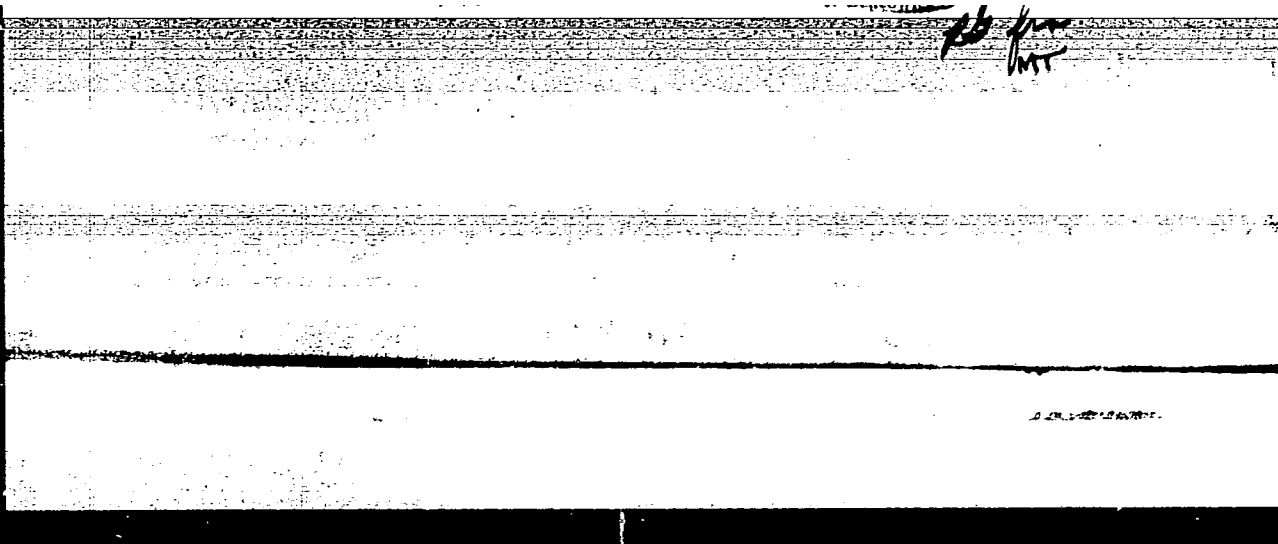
concentration of U^{IV} the stationary concentration of U^V becomes greater. Radiation yields $G(U^V)$ were found to be 2.1, 1.5, 1.06 per 100 ev of absorbed radiation for 0.1, 0.2 and 0.4 M solutions of U^{IV} respectively. The stationary concentrations of U^V were 1.2×10^{-4} , 2.2×10^{-4} and 3×10^{-4} M for the same solutions. There are 5 figures.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-Chemical Institute L. Ya. Karpov)

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CIA-RDP86-00513R001134310C

SOV/137-58-10-20757 D

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 58 (USSR)

AUTHOR: ~~Miller, O.G.~~

TITLE: A Study of the Behavior of Lead in the Converter Treatment of Polymetallic Mattes (Izucheniye povedeniya svintsa pri konvertirovanii polimetallicheskih shteynov)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Technical Sciences, presented to the Kazakhsk. gorno-metallurg. in-t (Kazakh Institute for Mining and Metallurgy), Alma-Ata, 1957

ASSOCIATION: Kazakhsk. gorno-metallurg. in-t (Kazakh Institute for Mining and Metallurgy), Alma-Ata

1. Ores--Processing 2. Lead--Properties

Card 1/1

137-1958-2-2629

Miller, O. G.
Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 61 (USSR)

AUTHOR: Miller, O.G.

TITLE: The Change in Composition of the Mattes at a Lead Works in the
Course of the Conversion Process (Izucheniye izmeneniya sostava
shteynov svintsovogo zavoda po khodu protsessa konvertirovaniya)

PERIODICAL: Tr. Altaysk. gornometallurg. n.-i. in-ta, 1957, Vol 5, pp 93-110

ABSTRACT: A study was made of the chemical and mineral composition of
slag and matte specimens obtained from the molten stream and
through a tuyere. It was evident that Pb existed in the mattes of
the Pb heat basically in a metallic form. At the beginning of the
process the Pb became sulfidized, and much of the sulfide promptly
sublimed. Part of the sulfide remained in the slag in the form of
extremely fine droplets. At the end of the initial period an observ-
able oxidation of the Pb began, and the appearance of metallic Pb
was again noted (a product of the smelting reaction), which was
dissolving in metallic Cu. Complete removal of the Pb was
assured by a hot run of the converter and by increasing the volume
of exhaust gases through a brief injection of liquid fuel. The Fe
was almost completely scorified early in the conversion operation

Card 1/2

137-1958-2-2629

The Change in Composition of the Mattes at a Lead Works (cont.)

at the same time the Zn also passed into the slag. The Cu sulfide was noticeably oxidizing in the latter part of the conversion operation, after the Fe had become scorified.

L. P.

1. Lead--Conversion--Processes 2. Gases--Applications

Card 2/2

78-3-4-15/38

AUTHORS: Abdeyev, M. A., Miller, O. G.

TITLE: Investigations Within the Domain of Layer Formation in the System Lead-Copper (Izucheniye oblasti rasslaivaniya v sisteme svinets-med')

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 4, pp. 921-923 (USSR)

ABSTRACT: The domain of layer formation in the system lead-copper was investigated by the method of determination of vapor pressure of lead above the system at 1000°, 1100° and 1200°C. At a lead content of from 23 - 80 % in the melt the vapor pressure of lead is almost constant at 1100°C which proves the presence of a layer formation at this temperature. At temperatures of 1200°C and more the vapor pressure of lead above the investigated melt changes with the change of the composition. This shows that the melt lead-copper at temperatures exceeding 1200°C represents an homogeneous solution.

The critical point of layer formation in the system lead-copper is at about 1150°C.

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These facts indicate that the phase diagram of the system

78-3-4-15/38

Investigation Within the Domain of Layer Formation in the System Lead-Copper

lead-copper at higher temperatures is incomplete and that detailed investigations of this system at higher temperatures are necessary. There are 1 figure, 1 table, and 5 references, 2 of which are Soviet.

ASSOCIATION: Altayskiy gorno-metallurgicheskiy institut Akademii nauk
Kazakhskoy SSR, Ust'-Kamenogorsk
(Ust'-Kamenogorsk, Altay Metallurgical Mining Institute, AS
Kazakh SSR)

SUBMITTED: June 25, 1957

Card 2/2

MILLER, O.G.

Studying the effect of oxygen blown into converters on the removal of lead from complex ore mattes in the converting process. Trudy Alt.OMNII AN Kazakh.SSR 6:157-164 '58.
(MIRA 12:1)
(Nonferrous metals--Metallurgy) (Lead) (Converters)

SOV/136-59-3-6/21
AUTHOR: Abdeyev, M.A., Miller, O.G., Kubyshev, N.N. and
Matveyev, A.T.
TITLE: Conversion of Lead Matte at the Ust'-Kamenogorsk Lead
Works (Konvertirovaniye vysokosvintsovistykh shteynov
na Ust'-Kamenogorskom svintsovom zavode)

PERIODICAL: Tsvetnyye Metally, 1959, Nr 3, pp 23 - 25 (USSR)

ABSTRACT: A method of obtaining copper is given from matte containing 18-24% Cu, 12-18% Pb, 24-30% Fe, 7-8% Zn, 0.5-2.5% As, 0.5-0.8% Sb and 15-18% S. The main difficulty is the presence of lead in the matte. This is removed by an after-blow. During the afterblow, copper is also oxidised and passes into the slag. This is decreased by addition of coke which reduces the copper oxide and copper passes back from the slag. The lead sublimes. It is necessary to submerge the blast deeply for several minutes. Three operations are given. The first is used for small quantities of matte. 40 kg coke are used in the afterblow. Intensive removal of sulphur only begins when the blast is deeply submerged in the metal. 1.5 tons Cu is obtained with analysis:

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SOV/136-59-3-6/21
Conversion of Lead Matte at the Ust'-Kamenogorsk Lead Works

99.07% Cu, 0.2% Pb, 0.2% Zn and 0.2% Fe. The second and third operations yield 3-4.5 tons copper using a full 8-ton converter, the full reaction taking twelve hours. 50 kg coke is used and copper with an analysis of 98.18% Cu, 1.0% Pb, 0.2% Fe and traces of S is obtained. The slag from this reaction contains 18.8% Cu, 15.93% Pb, 24.3% Fe and 15% SiO_2 .

There is 1 table.

ASSOCIATIONS: Altayskiy gorno-metallurgicheskiy institut (Altay Mining-metallurgical Institute) (Abdeyev, Miller)
Ust'-Kamenogorskiy svintsovo-tsinkovyy kombinat (Ust'-Kamenogorsk Lead-zinc Combine) (Kuybyshev)
Irtyskiy medeplavil'nyy zavod (Irtys Copper-smelting Works) (Matveyev)

Card2/2

MILLER, O.G.

Converting complex metal mattes and speiss. Trudy Alt. GMI
AN Kazakh SSR 9:238-242 '60. (MIRA 14:6)

1. Altayskiy gornometallurgicheskiy nauchno-issledovatel'skiy
institut AN Kazakhskoy SSR.

(Nonferrous metals—Metallurgy)

(Converters)

MALKIN, I.M.; CHIRKOVA, N.P.; NEYMAN, V.G.; KARLINSKAYA, L.S.; GANCHENKO, V.M.; POKIDYSHEV, M.I.; CHERNYSHEV, Yu.P.; PLATONOV, G.P.; MIKHAYLOV, H.I.; ABDEYEV, M.A.; MILLER, O.G.; BUTENKO, N.S.; DYUYSEKIN, Ye.K.

Treatment of zinc-bearing slags in electric furnaces with coke conductivity. TSvet. met 33 no. 12:15-23 D '60. (MIRA 13:12)

1. Leninogorskiy polimetallicheskiy kombinat (for Malkin, Chirkova, Neyman, Karlinskaya, Ganchenko, Pokidyshev, Chernyshev). 2. Altayskiy gorno-metallurgicheskiy institut AN KazSSR (for Platonov, Mikhaylov, Abdeyev, Miller, Butenko, Dyuysekin).
(Zinc--Electrometallurgy) (Electric furnaces)

MILLER, O.G.; KUMRYAKOV, Yu.P.; ABDEYEV, M.A.; MIKHAYLOV, N.I.

Reducing losses of copper with waste slags at the Karsakpay
plant. Trudy Akad. Nauk Kazakh SSR 11:3-9 '61.

(MIRA 14:8)

(Karsakpay—Copper industry) (Smelting furnaces)

MILLER, O.G.; ABDEYEV, M.A.

Solubility of lead in the system copper - iron - sulfur. Trudy Alt.
GMNII AN Kazakh. SSR 14:110-113 '63. (MIRA 16:9)
(Sulfides—Metallurgy) (Lead) (Solubility)

KUPRYAKOV, Yu.P.; MILLER, O.G.

Use of oxygen in reverberatory smelting of copper concentrates.
Izv. AN Uz. SSR. Ser. tekhn. nauk 8 no.5:78-80 '64. (MIRA 18:2)

1. Sredneaziatskiy filial Gosudarstvennogo nauchno-issledovatel'skogo instituta tsvetnykh metallov.

KUPRYAKOV, Yu.P.; MILLER, O.G.; SAMKOV, Ye.A.

Use of an air-oxygen blow in the reverberatory smelting of copper concentrates. TSvet. met. 38 no.9:27-31 S '65.

(MIRA 18:12)

MILLER, O.G.; RASSKAZOV, A.P.

Effect of the consumption of quartz flux on the distribution
of metals in the conversion of polymetallic mattes. Izv. AN
Uz. SSR. Ser. tekhn. nauk 7 no.1:74-80 '63.

(MIRA 17:6)

1. Gornyy otdel AN UzSSR.

MILLER, C. N.

FD-496

USSR/Nuclear Physics - Photography

Card 1/1 : Pub. 146-13/18

Author : Miller, O. N. and Sirotinskaya, A. A.

Title : Method of introduction of thin wires into thick layer photoplates

Periodical : Zhur. eksp. i teor. fiz., 24, 237-239, Feb 1953

Abstract : Suggests a new method of introducing various substances into the emulsion of thick-layer photoplates to study phenomena connected with interaction of elementary particles with nuclei of introduced elements. Indebted to V. M. Uvarova, V. D. Davidov and S. S. Vasil'yev. 5 references, including 5 foreign.

Institution : Moscow State University

Submitted : June 30, 1952

8/285/63/000/002/004/012
A052/A126

AUTHOR: Miller, Petr

TITLE: VIBROTURB 3 unit for measuring resonance frequencies of turbine blades

PERIODICAL: Referativnyy zhurnal. Otdel'nyy vypusk. 47. Turbostroyeniye, no. 2, 1963, 8, abstract 2.49.47. (Kovoexport (CSSR), v. 8, no. 8, 1962, 8 - 11)

TEXT: VIBROTURB 3 developed at the State scientific research institute of thermal engineering in Prague consists of two parts: a portable electrical part and a mechanical support for fixing electromagnetic vibrator and pickup. The error of frequency measurement does not exceed 0.5%. A detailed description of the device and the information relating to its service advantages are given. There are 4 figures.

[Abstracter's note: Complete translation]

Card 1/1

L 45207-66 EWP(c)/EWP(k)/EWP(h)/I/EWP(v)/EWP(1) IJP(c)

ACC NR: AP6023984

SOURCE CODE: CZ/0040/66/000/007/0169/0170

AUTHOR: Miller, Peter (Engineer)

ORG: none

TITLE: Development of Aeroflot //

SOURCE: Letecky obzor, no. 7, 1966, 169-170

TOPIC TAGS: passenger aircraft, transport aircraft, jet aircraft, //
civil air fleet, civil aviation service, civil aircraft data/Aeroflot

ABSTRACT: The past development of Aeroflot and plans for the future are reviewed. The types of aircraft which have been used in passenger and cargo service from 1923 to the present are given. Also mentioned are some aircraft engines of the preturbo-jet era. The Tu-104 A, Tu-104 B, Il-18, An-10, Tu-114, and An-24 airliners are listed as aircraft currently in service. The following types are said to be scheduled for operational service soon, or are under development. The Il-62, scheduled for service in 1967, is designed for 186 passengers or a 22—23-ton payload, flight range

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ACC NR: AP6023984

6500 km, cruising speed 850—900 km/hr. A 1970 version of the Il-62 is expected to have an increased range of 11,000 km with 100 passengers, or 8500 km when carrying 220 passengers. In 1968 the Tu-154 is scheduled to replace the Tu-104, Il-18, and An-10. It is a tripple-engined rear-jet aircraft designed to carry 160 passengers or a 16-18-ton payload, range 3500 km, cruising speed 900 km/hr. When operated from a first-class airport, with a runway 2600-m long, the range may be increased to 4500 km. The Tu-134, is presently undergoing flight tests. It is powered by two rear-jet engines of 6800-kg thrust each. Designed to carry 72 passengers or a 7—7.8-ton payload, range 2400 km, cruising speed 800—840 km/hr. The An-22 "Anteus" is also in flight testing. It is designed for an 80-ton payload capacity with a flight range of 5000 to 11,000 km. Improved range and payload is sought for the An-24, presently in service on local lines. Under construction is the Yak-40 a tripple-engine rear-jet feeder liner for 24 passengers, with a range of 600 km, cruising speed of 550—600 km/hr, and the ability to operate from sod airfields 700--750-m long. The takeoff thrust of the engine is 1500 kg. Under development is the Tu-144 supersonic transport, which will carry 120 passengers at a cruising speed of 2500 km/hr and will have a range of 6500 km. Generally, after 1970 there will be a marked improvement in the performance of practically all types of airliners

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L 45207-66

ACC NR: AP6023984

in operation listed in this article. Several tables in the article illustrate the growth of Aeroflot in the period 1923—1965 with regard to the passenger-cargo volume, ton/km costs, tariffs, and the length of air routes serviced. Orig. art. has: 4 tables. ¹⁴ [KP]

SUB CODE: 01/ SUBM DATE: none/

Card 3/3

hs

S/081/61/000/019/005/085
B101/B110

AUTHOR: Miller, R.

TITLE: Lateral displacement of the 180° wall in BaTiO_3 single crystals

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1961, 31 - 32, abstract 19B229 (Sb. "Fizika dielektrikov", M., AN SSSR, 1960, 329 - 338)

TEXT: A study has been made of the current of polarity reversal and of the domain structure of a BaTiO_3 crystal with partially reversed polarity.

Metallic and liquid electrodes were used to study the change in direction of polarization as dependent on the electric-field strength. With the use of liquid electrodes, the author found many large, reoriented domains in specimens with partially reversed polarity. With the use of metallic electrodes, the number of reoriented domains was found to be 1 - 2 orders of magnitudes less. It was shown that the velocity v of lateral displacement of the domain wall varies according to the law: $v = v_\infty \exp(-\delta/E)$, where v_∞ and δ are not field-dependent; $v_\infty \approx 10$ cm/sec; the activating field δ varies Card 1/2

Lateral displacement of the...

S/081/61/000/019/005/085
B101/B110

from 2000 to 4000 v/cm. The displacement of the 180° domain wall in BaTiO_3 is different from that found in Rochelle salt, in which $v \sim (E - E_0)$, where E_0 denotes the coercive field. The exponential dependence of v is obviously due to the mechanism of nucleation in the direction of motion of the 180° domain wall since the nucleation process is probably an exponential function of the field. According to existing data, the 180° walls are not parallel to the ferroelectric axis but form an angle with it. Owing to the mechanism of nucleation, such walls may be displaced more easily. [Abstracter's note: Complete translation.] ✓

Card 2/2

MILLER, R.

"Calendering twilled fabrics.W p. 81. (ODZIEZ, Vol. 4, no. 3, Mar. 1953, Lodz, Poland)

SO: Monthly List of East European Accessions, L. C., Vol. 3, No. 5, May 1954, Uncl.

MILLER, Rudolf

BOGACH, Frantisek [Bohac, Frantisek]; MILLER, Rudolf, inzhener.

The railroad car industry in Czechoslovakia. Zhel. dor. transp.
39 no. 5:39-42 My '57. (NIRA 10:6)

1. Zamestitel' nachal'nika Tsentral'nogo upravleniya lokomotivnogo i vagonnogo khozyaystva Ministerstva transporta (for Frantisek).
2. Nachal'nik otдела Tsentral'nogo upravleniya lokomotivnogo i vagonnogo khozyaystva Ministerstva transporta (for Miller).
(Czechoslovakia--Railroads--Cars)

MILLER, Rudolf, inz.

More cleanness in passenger cars. Zel dop tech 9 no.12:355-357 '61.

MILLER, S.

MILLER, S.

Three steps toward mechanization of the preparation of soil for afforestation, p. 27.
(LAS POLSKI, Warszawa, Vol. 27, no. 3, Mar. 1953.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 6, Jan. 1955,
Uncl.

MILLER, STANISLAW.

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DA Not in DLC

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Poland

So: East European Accession, Vol. 6, No. 5, May 1957

MILLER, S.

How we used the crop of beechnuts. p. 10

LAS POLSKI. (Ministerstwo Lesnictwa oraz Stowarzyszenie Naukowo-Techniczne Inzynierow i Technikow Lesnictwa i Drzewnictwa) Warszawa, Poland. Vol. 29, no. 1, Jan. 1955

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MILLER, S.

For properly collecting cones and bringing them to places for removing the seeds.
p. 39

IAS POLSKI. (Ministerstwo Lesnictwa oraz Stowarzyszenie Naukowo-Techniczne
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no. 1, Jan. 1955

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Uncl.

MILLER, S.; KROL, S.

What looks like this year's spring campaign for afforestation. p. 7

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MILLER, S.

New elements for the design of a four-bar linkage. p. 525.

PRZEGLAD MECHANICZNY. (Stowarzyszenie Inzynierow i Technikow Mechanikow Polskich) Warszawa, Poland, Vol. 18, no. 16, Aug. 1959.

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Uncl.

MILITARY, S.

The head of a harvester rake. p. 267.

(ARCHIWUM BUDOWY MASZYN. Vol. 4, no. 2, 1957. Warszawa, Poland)

SO: Monthly List of East European Accessions (REAL) 12. Vol. 6, no. 12, Dec. 1957.
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(MIRA 18:11)

1. Zamestitel' direktora Gosudarstvennoy elektrotekhnicheskoy
fabriki "VEF", Riga.

MILLER, Stefan, dr. inż., adiunkt

Designing systems with driving element of variable length.
Przegl mech 23 no.24:706-709 25 D '64.

1. Department of General Theory of Machines and Mechanisms,
Technical University, Wrocław.

MILLER, Stefan, dr inz.

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1. Politechnika, Wroclaw.

ZYGMUNT, K., doc. dr. inz.; MILLER, Stefan, dr. inz.; WIEBILIS, Stanislaw,
mgr. inz.; KUS, Andrzej, mgr. inz.

Review of the technical press. Przegl mech 24 no.2:56-61 25 Ja '65.

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Conditions for assembling toothed gears in closed circuit.
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1. Katedra Teorii Mechanizmow, Politechnika, Wroclaw.

MILLER S. D.

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mapping and exploration. Razved. i okh. neдр. 21 no. 4: 1955
Draг. '55. (PROSPECTING--GEOPHYSICAL METHODS)

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MILLER, S.M.

MILLER, S.M.; MIDIS, S.M.

Quality of nonferrous metal scrap and waste. TSvet.net. 27 no.6:47-50
N-D '54. (MIRA 10:10)

(Nonferrous metals)

MILLER, S.M.

ISTRIN, Mikhail Aleksandrovich; LEVITIN, Vul'f Khananovich; RUBINSHTYIN, Iosif Grigor'yevich; MILLER, Solomon Mikhaylovich; MILLER, L.Ye., kandidat tekhnicheskikh nauk, Pervichnyi; BELOV, V.Ya., redaktor; CHERNOV, A.N., redaktor; ARKHANGEL'SKAYA, M.S., redaktor izdatel'stva; MIKHAYLOVA, V.V., tekhnicheskii redaktor

[Secondary nonferrous metals] Vtorichnye tsvetnye metally; spravochnik. Izd. 3-e, perer. i dop. Pod red. V.IA.Belova. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po cherno i tsvetnoi metallurgii. Pt.1. [Procurement and primary processing] Zagotovka i pervichnaya obrabotka, 1956. 558 p. (MIRA 9:7)
(Nonferrous metals)

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Slabs from in slag melts for floors of industrial buildings.
Lit. proizv. no.11:42-43 N '64. (MIRA 18:8)

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[illegible]

MILLER, S.V.

37526 Osnovnyye voprosy gigiyeny truda v alyuminiyevom proizvodstve. v SE: XII
vsesoyuz. S'yezd gigiyenistov, epidemiologov, Mikrobiologov I infektsionistov
T.I.M., 1949, s.152-54

SO: Letopis'Zhurnal'nykh Statey, Vol. 37, 1949

CA

7

Prophylaxis of manganese poisoning in steel smelting.
S. V. Miller, V. N. Dymchenko, S. D. Likhtenshtein,
and M. I. Episheva (Ind. Hyg. Inst., Sverdlovsk).
Gigiena i Sanit. 1950, No. 1, 26-9. Air analysis in various
locations of a steel-treating plant showed numerous loca-
tions contg. over 0.0001 mg./l. of Mn; this is especially
true in winter months. Usually MnO and Mn₂O₃ are found
in the aerosols. Localized, individual suction outlets are
recommended, especially at the sites of melting opera-
tions, for generally improved ventilation. G. M. K.

VISHNEVSKIY, V.L., glav. red.; MILLER, S.V., prof., red.; MATS,
OSHCHEPKOVA, A.N., red.; SAKULIN, I.P., dots., red.;
ROSTIK, M.B., red.

[Materials of the Second Scientific and Practical Conference of Sverdlovsk City and Province Sanitary and Epidemiological Station] Materialy Vtoroi nauchno-prakticheskoi konferentsii Sverdlovskoi gorodskoi i oblastnoi sanitarno-epidemiologicheskikh stantsii. Sverdlovsk, 1962. 223 p.
(MIRA 17:5)

1. Nauchno-prakticheskaya konferentsiya Sverdlovskoy gorodskoy i oblastnoy sanitarno-epidemiologicheskikh stantsii. 2d, Sverdlovsk, 1961. 2. Zaveduyushchiy Sverdlovskim oblastnym otделom zdravookhraneniya (for Vishnevskiy).
2. Sverdlovskaya gorodskaya sanitarno-epidemiologicheskaya stantsiya (for Rostik).

MILLER, S.V.

Fifth scientific session of the Sverdlovsk Institute of Industrial
Hygiene and Occupational Diseases. Gig. 1 san. no.11:53-55 N '54.
(INDUSTRIAL HYGIENE (MIRA 7:12)
in Russia, conf.)
(OCCUPATIONAL DISEASES, prevention and control
in Russia, conf.)

SOV/137-57-1-1661

Translation from: Referativnyy zhurnal. Metallurgiya, 1957, Nr 1, p 222 (USSR)

AUTHORS: Miller, S. V., Gorlanova, N. M., Glushkov, L. A., Bessonova, A. P.,
Gotlib, Ye. V., Saknyn', A. V., Cherepanova, K. A.

TITLE: Results and Goals of the Scientific Work on Labor Hygiene in Electrolytic Shops of Aluminum Plants (Itogi i zadachi nauchnoy raboty v oblasti gigiyeny truda v elektroliznykh tsekhakh alyuminiyevykh zavodov)

PERIODICAL: V sb.: Vopr. gigiyeny truda, professional'noy patologii i toksikologii v prom-sti Sverdl. obl., Sverdlovsk, 1955, pp 121-127

ABSTRACT: The unsatisfactory sanitary working conditions in electrolytic shops of Al plants are characterized by the presence in the atmosphere of Fe compounds, the amounts of which near the baths (B) and in working passages exceed the permissible concentrations by 200-600%. The dust content in the atmosphere during the preparation of B attains 30-60 mg/m³. The radiant-heat flux during the period of B preparation amounts to 2-4 cal/cm² per min, but it may attain 9-10 cal/cm² for short periods of time. The jumps and drops in air temperatures close to B's and in the passages is

Card 1/2

SOV/137-57-1-1661

Results and Goals of the Scientific Work on Labor Hygiene (cont.)

10-20°C higher than those termed permissible by sanitation standards. During the cold-weather period, when the air is changed 10-13 times per hour, the temperature falls below 0°C. All these conditions bring about a chronic Fe poisoning ["F." in the Russian text. Transl. note], koniotic changes in the lungs, and an increase of the over all incidence of sickness. For the improvement of sanitary conditions it is recommended that the leakage of heat and harmful gases into the air from the electrolytic B be minimized by means of decreasing the leakages in the exhaust-ventilation hoods, reducing the time required for B preparation through the mechanization of the process of continual intake of alumina into the B underneath the crust instead of batch loading. Measures were outlined for sanitary protection of the atmosphere on the lands covered by a plant and neighboring residential areas from harmful discharge of dust, tarry substances, etc.

B. T.

Card 2/2

USCOMM-DC-61131

MILLER, S.V., prof.

Maximum permissible concentration of fluorine compounds in the
air in populated areas. Pred.dop.kontsent.atmosf.zagr. no.2:29-46
'55. (MIRA 10:11)

1. Iz Sverdlovskogo instituta gigiyeny truda i profzabolevaniy.
(AIR--POLLUTION) (FLUORINE COMPOUNDS)

MILLER, S. V.; BESSONOVA, A. P.; GLUSHKOV, L. A.; GORLANOVA, N. M.; GOTLIB, YE. V.;
SAKYN', A. V.; STONIN-BAKHUREV, I. M.; FILATOVA, A. S.; SURIS, V. G.; GRUKUS, G. D.

"Sanitary labor conditions in the electrolytic shops of aluminum plants and
the essential health-protection measures."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists
and Infectionists, 1959.

MILLER, S.V.

Sverdlovsk interinstitute conference on problems of the
pathogenesis, clinical aspects, and prophylaxis of silicosis
and other forms of pneumoconiosis. Gig.truda i prof.zab. 3
no.2:55-56 Mr-Apr '59. (MIRA 12:6)
(LUNGS--DUST DISEASES--CONGRESSES)

MILLER, S.V., prof.; SADILOVA, M.S. (Sverdlovsk)

Activity of the Sverdlovsk section of the All-Russian Medical Society
of Hygienists and Sanitary Physicians in 1960 and the first half of
1961. Gig. i san. 26 no.10:89-91 0 '61. (MIRA 15:5)
(SVERDLOVSK—PUBLIC HEALTH SOCIETIES)

Miller, S. Ye.

POKS, A.D.; MILLER, S. Ye.; VEIS, M.T.; LOMIZH, L.G. [translator]; MIRIMANOV, Ruben ~~Ulyevich~~, redaktor; KRYUKOV, I.A., redaktor; KORUZH, N.N., tekhnicheskiy redaktor

[Behavior and application of ferrites in the microwave region.
Translated from the English] Svoistva ferritov i ikh primeneniye
v diapazone SVCH. Perevod s angliiskogo L.G. Lomize. Moskva, Izd-
vo "Sovetskoe radio," 1956. 99 p. (MLRA 9:3)
(Ferromagnetism)

MILLER, T.

Technology of thin-walled bushings for the Warszawa M20 passenger car. p. 117, Vol. 5,
no. 4, Apr. 1955, *TECHNIKA MOTORYZACYJNA*
SO:MONTHLY LIST OF EAST EUROPEAN ACCESSIONS, (EEAL), LC, VOL.4, no. 9.
Sept. 1955, Uncl.

MILLER, V., inzhener (g. Praga)

Track machinery on Czechoslovak railroads. Put' i put. khoz. no.1:
47 Ja '57. (MLRA 10:4)
(Czechoslovakia--Railroads--Rails)

MILLER, V., inzhener (g. Praga).

Track tools in Czechoslovakia. Put' i put. khes. no. 2:47 F '57.
(Czechoslovakia--Railroads--Tools and implements) (MIRA 10:4)

L 10267-63

BDS

ACCESSION NR: AP3000572

S/0109/63/008/005/0875/0878

AUTHOR: Miller, V. A.

47

TITLE: Use of diverging lenses in oscilloscopic electron-beam tubes

SOURCE: Radiotekhnika i elektronika, v. 8, no. 5, 1963, 875-878

TOPIC TAGS: oscilloscopes, electron lenses

ABSTRACT: Single diverging electron lenses⁰ have been used to increase the sensitivity of oscilloscopes. This practice is examined in the article and compared with the use of immersion diverging and converging lenses. By using relative deflection as a criterion of the volume of information supplied by the tube screen, the following conclusions are drawn: 1) the single diverging lens results in a decreased volume of information, which renders the lens ineffective; 2) the immersion diverging lens is less effective than the converging lens conventionally used in post-accelerating-type tubes, and the latter insures the greater volume of information. Orig. art. has: 13 equations and 3 figures.

ASSOCIATION: none

Card 1/t/

MILLER, Viktor Aleksandrovich; KURAKIN, Lev Anatol'yevich; GERUS,
V.L., red.; LARIONOV, G.Ye., tekhn. red.

[Electron-beam receiving tubes; their properties and parameters] Priemnye elektronno-luchevye trubki (svoistva i parametry). Moskva, Izd-vo "Energia," 1964. 367 p.
(MIRA 17:2)

CA

Isotope exchange between propyl bromide and sodium bromide in alcoholic solution. V. H. Miller, M. H. Neimann, and Yu. M. Shapovalov. Doklady Akad. Nauk S.S.S.R. 79, 419-22 (1960). The exchange reaction between initially inactive PrBr and tagged NaBr^* , where Br^* = almost pure radioactive Br^{82} 34 hrs. (made by 60 hrs. neutron irradiation of PrBr and NaBr , with an eq. soln. of NaBr), with equal concs. of PrBr and NaBr , 10 millimoles/100 ml., follows a simple 2nd-order rate law, with $10^4 k = 0.212, 2.13, 8.4, 26 \text{ l./mole. sec.}$, at 25, 61, 79, 100°, resp. The ratio of the activities of PrBr and NaBr tends to the limit 0.5, i.e. equal distribution at equil. The activation energy $E = 18.0 \text{ kcal./mole}$. Assuming a collision diam. $\sigma = 3 \times 10^{-8} \text{ cm.}$ and a steric factor = 0.01, the expl. k is in agreement with the activated-complex theory. The reaction is assumed to proceed over ionization, $\text{PrBr} \rightleftharpoons \text{Pr}^+ + \text{Br}^-$, followed by $\text{Pr}^+ + \text{Br}^{*-} \rightarrow \text{PrBr}^*$. The assumption of an ionization of PrBr is consistent with the observation of Gerd (C.A. 64, 5192g) on the elec. cond. of EtI in eq. soln. N. Thon

Inst. Chem. Phys, AS USSR

1957

CA

3A

New method of determination of solubility with the aid of radioactive indicators. M. B. Neiman, V. B. Miller, and A. I. Fedosova (Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 78, 719-21 (1961).—To a soln. contg. an insponderable amt. of ions A with a radioactivity c (counts/min.), one adds a millimoles of inactive A as carrier, then the reagent D necessary for the pptn. of the compd. B of unknown soly., and one brings the vol. of the soln. to v_1 ml. The ppt. of B , which contains part of the activity, is filtered, washed, and dried; let its activity be I_1 counts/min. To the filtrate, which contains the activity corresponding to the soly. of B , one adds again a millimoles of the inactive carrier A , and the reagent D , and brings the vol. to v_2 ml. The 2nd ppt. of B is again filtered, washed, and dried; let its activity be I_2 . If the unknown soly. of B is x millimoles/ml., the amt. of B remaining in soln. after the 1st pptn. is xv_1 , and its amt. in the ppt. is $(a - xv_1)$ millimoles. The activity of the 1st ppt. is $I_1 = c(a - xv_1)/a$. After the 2nd pptn., the soln. contains xv_2 , and the ppt. $(a + xv_1 - xv_2)$ millimoles of B . The activity of the 2nd ppt. is $I_2 = (cxv_1/a) [(a + xv_1 - xv_2)/(a + xv_1)]$. The measured quantity is the ratio $\beta = I_1/I_2$, and x is found by solving a quadratic equation, as a function of a , v_1 , v_2 , and β . If $v_1 = v_2 = v$, the formula simplifies to $x = a(\sqrt{\beta^2 + 4} - \beta)/2v$. The method was applied to the detn. of the soly. of $Cu_2(CNS)_2$ in a 50% soln. of $ZnSO_4$ at 20° , with Cu^{64} as the radioactive indicator, and 15 mg. (0.061 millimole) of $CuSO_4$ as carrier; the vol. v at each pptn. was 250 ml. The soly. of $Cu_2(CNS)_2$ was found $= 0.46 \pm 0.05$ millimole/l. As another example, the soly. of $MgNH_4PO_4$ was detd. by pptn. of Na_2HPO_4 with $MgCl_2 + NH_4Cl$, with the result that a 4-fold excess of the reagent is sufficient for complete pptn. N. Thon

MILLER, V. B.

Nuclear Physics. "Study of Bromine Isotope Exchanges between Propyl Bromide and Sodium Bromide in Alcohol," Nuclear Sci. Abstracts, 5, No. 8, 1951.

MILLER, V. B. NEYMAN, M. B., SAZONOV, L. A.

ADSORPTION

General method for investigation of coprecipitation and adsorption with the aid of tagged atoms. Zhur. anal.khim. 7 no. 5, 1952.

Developed a general method for studying co-precipitation, using radioactive isotopes. Studied the relation of co-precipitation of SrCrO_4 with BaCrO_4 at different relative concns, at various pH values. The max co-precipitation was detd at a definite pH value. A spatial diagram of the co-precipitation of SrCrO_4 and BaCrO_4 was plotted. With the aid of this diagram, improvements were made on the chromate method of separating Ba from Sr.

261T29

9. Monthly List of Russian Accessions, Library of Congress, December 1953, Uncl.
2

MILLER, V. B.

261T102

USSR/Physics - Isotopes

May 53

"Applications of Radioactive Isotopes in Analytic Chemistry," M.B. Neyman and V.B. Miller

Usp Fiz Nauk, Vol 50, No 1, pp 93-122

Describes applications of radioactive isotopes in analytic chemistry. Divides the material into 3 sections: phys methods, chem methods of analysis, and applications to research. Refers to own former works in Uspekhi Khimii 17 (1948); works of P. Daudel, Anal. Chim. Acta 5 (1951); and those of P. Sue, Bull. Soc. Chim Fr., 9D, 5-6 (1951).

261T102

MILNER, V. B.

USSR.

✓ The effect of pressure on the rate of ionic isotope-exchange reactions. M. B. Nekman, M. G. Gonikberg, V. B. Miller, Yu. M. Shapovalov, and V. S. Zvezdkin. *Doklady Akad. Nauk S.S.R.* 92, 366-8 (1953); cf. *C.A.* 47, 3884. The kinetics of the isotope exchange between alkali halides and α -C₁₀H₇Br in EtOH was studied at 19° and at pressures of 1, 1500, and 2400 atm. The exchange rates were 1.2 and 1.8. In both cases an increase in the pressure increases the exchange rate. The data obtained can be used to calc. the difference in the vol. of the activated complex and of the initial materials. These values are given as $-\Delta v^\ddagger$ of 13 ml. and $-\Delta v^\ddagger$ of 12 ml. J. Royter Leach

62
4

Inst. Chem. Phys. & Inst. Org. Chem., AS USSR

MILLER, V. B.
USSR/Physical Chemistry - Kinetics. Combustion. Explosives. Topochemistry.
Catalysis, B-9

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61060

Author: Neyman, M. B., Miller, V. B., Shapovalov, Yu. M.

Institution: None

Title: Investigation of the Influence of the Structure of Molecules on the Velocity of Ionic and Atomic Isotope Exchange Reactions.
I. Influence of Lengthening of the Carbon Atom Chain of the Alkyl Radical on the Velocity of Isotope Exchange of Alkyl Halide with Halogen Ions. II. Influence of Isomerization of the Radical and Introduction of a Double Bond on the Velocity of Isotope Exchange of Alkyl Halide with Halogen Ions

Original
Periodical: Zh. fiz. khimii, 1954, 28, No 7, 1243; 1955, 29, No 5, 892-897

Abstract: I. A study has been made of the kinetics of the reaction of isotope exchange: $RX + X^* \rightleftharpoons RX^* + X^-$, where $R = CH_3, C_2H_5, n-C_3H_7$ and $X = Br^{82}$ or I^{131} . The reaction was carried out in C_2H_5OH

Card 1/3

USSR/Physical Chemistry - Kinetics. ~~XXXXXXXXXXXXXXXXXXXX~~
Catalysis, B-9

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61060

Abstract: solutions containing 10% H_2O in the temperature region of 100° - 100° . Considered are the kinetics of different exchange mechanisms and it is shown that the velocity constant remains constant only with an ionic-molecular mechanism of the reaction. Energies (kcal/mol) and entropies (entropy units) of activation are for CH_3Br 17.5 and 19.5; C_2H_5Br 18 and 22.7; C_3H_7Br 18.4 and 22; CH_3I 15.4 and 19.5; C_2H_5I 19 and 17.4; C_3H_7I 19.3 and 13.3. From the obtained data it follows that alkyl iodides undergo exchange with ~~33~~ faster than alkyl bromides with Br^- . Lengthening of the carbon-atom chain in the alkyl halide radical slows down its isotope exchange with ions of the halogen. II. In a 90% ethanol solution were determined the energies of activation in kcal/mol (first figure) and the forexponent (1/mol sec) for the following reactions: (1) $(CH_3)_2CHBr + Br^{*-}$ (at 90° - 120°) 19.0 and 10^8 ; (2) $(CH_3)_2CHI + I^{*-}$ (40° - 80°) 20.0 and $6 \cdot 10^9$; (3) $CH_2 = CHCH_2Br + Br^{*-}$ (10° - 11°) 16.0 and $2.8 \cdot 10^8$. The data obtained confirm the assumption that in the case of ionic-molecular reactions associated with inversion of the configuration the velocity of the process is determined essentially

Card 2/3

USSR/Physical Chemistry - Kinetics. Combustion. Explosives. Topochemistry.
Catalysis, B-9

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61060

Abstract: by the energy barrier which must be overcome by the carbon atom on passing through the facet of the tetrahedron between substituents. Replacement of 2 atoms of hydrogen at the apexes of the facet by methyl radicals slows down the isotope exchange by more than 100 times and increases the energy of activation by 3-4.5 kcal/mol. Lowering of energy of activation of isotope exchange and increase in velocity of the reaction on introduction of a double bond in α, β -position indicate the possibility of the occurrence of the reaction in the case of alkyl bromide without inversion of configuration in accordance with the scheme: $\text{Br}^+ + \text{CH}_2 = \text{CHCH}_2\text{Br} + \text{Br}^-\text{CH}_2\text{CH} = \text{CH}_2 + \text{Br}^-$.

Card 3/3

MILLER, V. B.

USSR/Chemistry - Physical chemistry

Card 1/1 : Pub. 22 - 34/46

Authors : Neyman, M. B; Shapovalov, Yu. M.; and Miller, V. B.

Title : Substitution of H-atoms in a CH_3Br molecule by Br-atoms and its effect on the rate of ion isotope exchange.

Periodical : Dok. AN SSSR 97/4, 703-706, Aug 1, 1954

Abstract : The substitution of H-atoms in a CH_3Br molecule by Br-atoms and its effect on the rate and activation energy constant of the isotopic exchange reaction of Br-substitutes of methane with Br-ions, were investigated in a 90%-alcohol solution. Results indicated that the thermal effect of the isotope exchange reaction equalled zero and the equilibrium constant was independent of temperature. The mechanism of isotope exchange, is explained. Nine references: 8-USSR and 1-USA (1869-1953). Tables; graphs.

Institution : Acad. of Sc. USSR, Institute of Chemical Physics

Presented by : Academician N. N. Semenov, March 27, 1954

M. Neg, V. B.

✓ The effect of ~~substituent~~ ~~substituents~~ on the rates of ~~radical~~ ~~radical~~ and ionic isotope exchange reactions. II. The effects of radical isomerization and of the presence of a double bond on the rate of isotope exchange of halogen radicals with halide ions. M. B. Neiman, V. B. Miller, and Yu. M. Shepovvalov (Chem. Phys. Inst., Acad. Sci. U.S.S.R., Moscow). *Zhur. Fiz. Khim.* 20, 892-7 (1953); *Ch. A.* 40, 7938c. — The isotope exchange rate of iso-PrBr and iso-PrI with the corresponding halide isotope ions in 90% EtOH, and the effects of the γ - α linkage on the isotope exchange rate were studied. An isomerization of the alkyl radical

Miller
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CIA-RDP86-00513R001134310

when the halogen atoms are grouped around one C atom.

W. M. Sternberg

SL
PM

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CIA-RDP86-00513R001134310C

Miller, V.B.

MEYMAN, M.B.; MILLER, V.B.; SHAPOVALOV, Yu.M.

Investigation of the influence of molecular structure on the rate of ionic and atomic reactions in isotopic exchange. III. Influence of the number of halogen atoms to carbon atoms on the speed of ionic isotopic exchange of halogen derivatives of methane. Zhur. fiz.khim. 29 no.6:1042-1049 Jo '55. (MLRA 9:1)

1.Akademiya nauk SSSR, Institut khimicheskoy fiziki.
(Ion exchange) (Halides--Isotopes) (Methane)

MILLER, V. B.

USSR/ Chemistry - Isotopic exchange

Card 1/1 Pub. 22 - 26/49

Authors : Miller, V. B.; Neyman, M. B.; Savitskiy, A. V.; and Mironov, V. F.

Title : Study of the ion isotopic exchange of alpha-iodalkyltrialkylsilanes with iodine ions

Periodical : Dok. AN SSSR 101/3, 495-497, Mar 21, 1955

Abstract : The isotopic exchange of $(CH_3)_3SiCH_2I$, $(C_2H_5)_3SiCH_2I$ and $(C_2H_5)_3SiCHICH_3$ with sodium iodide was investigated in a 90% C_2H_5OH solution. The radio-isotope I^{131} with a life span of 8.0 days was employed in the role of the marked atom. The results obtained are shown in graphs. The rate of the ion exchange was determined by the energetic barrier which the carbon atom must penetrate when passing through the face of the tetrahedron the apexes of which are occupied by three substitutes. Ten references: 8 USSR and 2 USA (1935-1954). Tables; graphs.

Institution : Acad. of Sc., USSR, Inst. of Chem. Phys.

Presented by : Academician V. N. Kondratyev, October 23, 1954

MULLER, V. B.

V 9141

INVESTIGATIONS OF THE EFFECT OF MOLECULAR
STRUCTURE ON THE RATE OF IONIC AND ATOMIC
ISOTOPE EXCHANGE REACTIONS. IV. CHAIN RADICAL
ISOTOPE EXCHANGE OF ALKYL IODIDES WITH ELE-
MENTARY IODINE. M. B. Neiman, V. B. Muller, and Yu.
M. Shadravsky (Moscow Inst. of Chem. Physics). Zhur.

Vys. Khim. 30, 497-501 (1985) Mar. (In Russian)

The exchange reactions $RI + I_2^{131}$ in alcohol solution and
in CH_2Cl_2 solution have been studied. The

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Miller
Chem

INVESTIGATIONS OF THE EFFECT OF A SOLVENT ON
THE ISOTOPIC EXCHANGE REACTION RATE FOR $C_2H_5I + I^-$
AT 2500 KG/CM² PRESSURE. M. G. Gornberg, V. B.
Miller, M. B. Neiman, F. S. D'yachkovskii, G. I. Likh-
tseitn, and A. A. Opatovskii (Moscow Inst. of Chemical
Physics). *Zhur. Fiz. Khim.* 30, 784-8 (1956) June. (In
Russian)

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Results of investigation revealed that with the increase of
the atmosphere pressure up to 2500 kg/cm² the constant for
the $C_2H_5I + I^-$ isotopic exchange reaction rate, in alcohol
and alcohol-aqueous solutions, more than doubled. In ace-

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with measurements of compression for KI
solution in alcohol and acetone. (B.V.I.)

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CIA-RDP86-00513R001134310C

MILLER, V. B.

AUTHORS: Dzantiyev, B.G., Miller, V.B. and Nikonov, B.P. 109-3-18/23

TITLE: Evaporation of Barium and Strontium Oxides from an Oxide Cathode (Ispareniye okislov bariya i strontsiya s oksidnogo katoda)

PERIODICAL: Radiotekhnika i Elektronika, 1958, vol.III, No.3, pp. 431 - 433 (USSR).

ABSTRACT: The investigated cathodes were coated with the double carbonate containing radio-active traces Ba¹⁴⁰ and Sr⁸⁹. The carbonates were deposited on to the cores of electrolytic nickel by spraying and had a thickness of 100 μ . The active surface had an area of 0.2 cm². The investigation was carried out at various cathode temperatures (745 - 1300 °C), at various anode current densities (up to 2.2 A/cm²) and over varying periods of operation. The relationship between the evaporation of the oxides and the current density is shown in Fig.1, where the abscissae represent the current density and the co-ordinates give the amount of the evaporated oxides in %. The percentage of the evaporated oxides as a function of time is given in Fig.2; the curves were taken at a temperature of 1040 °C and at a current density of 0.75 A/cm². Fig. 3 shows the amount of the evaporated oxides as a function of the cathode temperature; the Card1/2 curves were taken after a 20-hour operation of the cathodes

109-3-18/23

Evaporation of Barium and Strontium Oxides from an Oxide Cathode

from which no current was drawn. From the above figures, it is seen that the evaporation of barium is more intense than that of strontium. Thus, at a temperature of 1 200 °C, nearly 90% of barium and only 10% of strontium is evaporated after a 20-hour operation. The authors express their thanks to Professor M.B. Neyman and B.M. Tsarov for their help and discussions. There are 3 figures and 5 references, 1 of which is Russian.

SUBMITTED: May 31, 1957

AVAILABLE: Library of Congress
Card 2/2

APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R001134310C

Thermal oxidative degradation of polypropylene. Part 1: General characteristics of the oxidation reaction. Vysokom.sped. 1 no.11:1696-1702 N '59. (MIRA 13:5)

1. Institut khimicheskoy fiziki AN SSSR.
(Propene)

MILLER, V.B.; NEYMAN, M.B.; SHLYAPNIKOV, Yu.A.

Thermal oxidative degradation of polypropylene. Part 2: Kinetics
of the initial stage of oxidation. Vysokom.sped. 1 no.11:
1703-1706 N '59. (MIRA 13:5)

1. Institut khimicheskoy fiziki AN SSSR.
(Propene)

5(4)

AUTHORS:

Miller, V. B., Neyman, M. B.,
Solodovnikov, S. P.

SOV/62-59-2-9/40

TITLE:

Investigation of the Reaction of Isotopic Exchange Between
Methyl Iodide and Iodine (Issledovaniye reaktsii izotopnogo
obmena yodistogo metila s yodom)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1959, Nr 2, pp 247-250 (USSR)

ABSTRACT:

In the present paper the isotopic exchange between CH_3J and J_2 was investigated in absence of solvents at 30 and 45°. The irradiation of the reaction mixture was carried out by means of a 2 SVDSH-250-3 quartz lamp (Fig 1). The experimental results are given in the table. As it can be seen the exchange rates in the dark and on light exposure are in accordance within error limits. This indicates that the higher concentration of iodine atoms in the volume due to irradiation does not affect the rate of the isotopic exchange. It might therefore be assumed that the exchange reaction in the volume does not take place over iodine atoms. The addition of oxygen does not influence the rate of the isotopic

Card 1/3

Investigation of the Reaction of Isotopic Exchange
Between Methyl Iodide and Iodine

SOV/62-59-2-9/40

exchange. This suggests that in the volume no radical chain reaction takes place as it is the case in solutions where the disappearance of alkyl radicals in the oxygen reduces the rate of the isotopic exchange. The dependence of the reaction rate on the pressure of the components is shown in figure 2. Accordingly, the reaction rate depends up to 0.25 mm linearly on the pressure of iodine. At higher pressure it remains practically constant. This is apparently in connection with the fact that the reaction is proceeding on the surface in this case. At a pressure over 0.25 mm a saturation of the surface occurs whereby an increase in pressure does not cause a considerable change in the reaction rate. There are 2 figures, 1 table, and 6 references, 1 of which is Soviet.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences, USSR)

Card 2/3